

## REMARKS

This Application has been carefully reviewed in light of the Office Action mailed May 12, 2010. At the time of the Office Action, Claims 33-41 were pending in this Application, and Claims 1-32 were previously cancelled without prejudice or disclaimer. All pending Claims 33-41 were rejected in the Office Action. Applicants respectfully request reconsideration and allowance of all pending claims.

### **Double Patenting Rejection**

The Examiner provisionally rejected Claims 33, 35-36, 38 and 41 based on the judicially created double patenting doctrine over Claims of related Patent No. 7,471,660 (hereinafter “‘660 Patent”) stating that the subject matter claimed in the instant application is fully disclosed in the related patent and would be covered by any patent granted since the related patent and the instant application are claiming common subject matter.

Applicants respectfully traverse the rejection. However, to reduce the cost and time required to obtain patent protection, a Terminal Disclaimer filed in compliance with 37 C.F.R. 1.321 is attached hereto. The Terminal Disclaimer is offered in the event the Examiner converts the provisional rejection to a rejection based on non-statutory double patenting grounds. The ‘660 Patent and the instant patent application are commonly owned by Siemens Aktiengesellschaft.

### **Rejections under 35 U.S.C. §103**

Claims 33-34 and 36-39 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Berger* (U.S. Patent Application Publication No. 2003/0221156).

Claims 35 and 40 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Berger* in view of *Das* (U.S. Patent No. 7,133,688).

Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, does not render the claimed embodiment of the invention obvious.

In order to establish a prima facie case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580

(C.C.P.A. 1974). Even if each limitation is disclosed in a combination of references, however, a claim composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). Rather, the Examiner must identify an apparent reason to combine the known elements in the fashion claimed. *Id.* “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Finally, the reason must be free of the distortion caused by hindsight bias and may not rely on ex post reasoning. *KSR*, 127 S.Ct. at 1742. In addition, evidence that such a combination was uniquely challenging or difficult tends to show that a claim was not obvious. *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc. and Mattel, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007), citing *KSR*, 127 S.Ct. at 1741.

The Examiner stated that *Berger* discloses puncture routines in tables 1-5 and that it would have been obvious to a person skilled in the art to understand the puncture dotting pattern is the desired choice of the inventor to select the puncture/dotting patterns in the communication device for encoding data. (Office Action dated 5/12/2010, page 4). Applicant respectfully disagrees.

First, *Berger* discloses only one puncture pattern in tables 1-5, i.e. only table 1 actually discloses the bit positions in the last column of different patterns. These patterns have all in common that with increasing number of punctured bits, only the highest bits of a data block are punctured. (*Berger*, page 4, paragraph [0034-36]. Thus, *Berger* only teaches a single method of providing puncture patterns.

Contrary to the Examiner's assumption, the claimed patterns are not merely a random selection from countless possible number of patterns. Rather, the claimed patterns are patterns for which the overall error rate is minimized. These patterns are not linear but comprise specific irregularities.

According to the independent claims, puncture patterns are claimed for which the center area of a data block is not punctured and which comprise an increasing puncture rate towards both edges or ends (beginning and end) of the data block with certain irregularities.

*Berger* neither discloses nor suggests such puncture pattern. as stated above *Berger* merely discloses patterns for which an increasing number of bits starting from the highest bit of a data block are punctured. No symmetry or irregularity is disclosed or suggested. Rather an increasing number of the highest bits are punctured. (*Berger*, Table 1, page 4) However, Applicant selected from a plurality of possible puncture patterns, patterns with an increasing puncture rates towards both edges of a data block those which are even more beneficial due to their specific puncture density and irregularities in the edge areas of a data block. In particular, the claimed pattern of claim 34 in which 31 of 111 bits are punctured shows a high density towards the data block edges and some irregularities while the center of the data block is unpunctured. All claimed patterns include at least one irregularity. This is different from merely increasing the puncturing rate up to a single end of a data block and leads to an unexpected result as explained in detail, for example in paragraph [0082] of the originally submitted specification.

The Examiner failed to explain why a person skilled in the art would randomly select the claimed puncture patterns when considering *Berger* who actually teaches away from using such patterns as stated above. These irregularities are selected due to the properties of the convolutional encoder. Thus, the specific claimed patterns take specific properties of the encoders into account to provide for an optimized puncture pattern.

Rather than claiming a complex method for generating the respective puncture patterns, Applicant decided to claim the specific resulting puncture patterns for specific puncture rates 8 of 48 and 31 of 111. However, these patterns are not merely randomly selected as alleged by the Examiner but are optimized in respect to the encoding process.

Hence, Applicant believes that all independent claims are allowable in view of the cited prior art. Applicants respectfully submit that the dependent Claims are allowable at least to the extent of the independent Claim to which they refer, respectively. Thus, Applicants respectfully request reconsideration and allowance of the dependent Claims. Applicants reserve the right to make further arguments regarding the Examiner's rejections under 35 U.S.C. §103(a), if necessary, and do not concede that the Examiner's proposed combinations are proper.

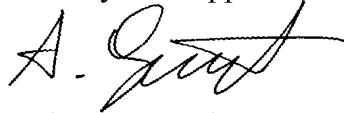
**CONCLUSION**

Applicants have made an earnest effort to place this case in condition for allowance in light of the remarks set forth above. Applicants respectfully request reconsideration of the pending claims.

Applicants believe there are no fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-4871.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.457.2025.

Respectfully submitted,  
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